

REMARKS

Applicants at the outset would like to thank the Examiner for the courtesies extended to applicants' undersigned attorney in the telephone interview conducted with the Examiner on August 29, 2007. During the interview, the Examiner's rejections in the Action were all discussed and applicants' comments below incorporate the substance of what was discussed. Although no final agreement was reached on the allowability of the claims, it is believed the Examiner was better able to understand applicants' positions on the rejections and will now give due consideration to same in reviewing this Amendment.

Claim 18 has been amended.

The Examiner has rejected applicants' claims 18, 20-22, 24-31 and 33-37 under 35 USC 112, second paragraph, as failing to comply with the written description requirement. In particular, the Examiner has stated regarding claim 18 that "the limitation 'corrugated' describing the current collector is new matter" and that "[s]upport for this limitation is not found in the original specification." This rejection is respectfully traversed.

As pointed out to the Examiner in the interview, the current collector 55 shown in FIGS. 1A, 2 and 3 of applicants' drawings is shown as corrugated. Accordingly, applicants' drawings support the recited term "corrugated" used in amended claim 18 and this term does not constitute new matter. Also, if the Examiner wishes, applicants will amend applicants' specification to specify that the current collector 55 is corrugated in conformity with the drawings.

The Examiner has also objected to claim 18 has not having an antecedent basis for the term "said region" used in line 12 of the claim and the term "said electrode" in line 1 of claim 21. In the interview, it was explained to the Examiner that the term "said region" in line 12 of

claim 18 is supported by the recitation of “the region” in line 6 of the claim. Applicants note that the latter recitation in line 6 of claim 18 has been changed --a region-- and provides the necessary antecedent basis for the recitation of “said region” in line 12 of the claim.

With respect to claim 21, applicants note that claim 18 recites “an electrode” in line 16 of the claim. This recitation thus provides an antecedent basis for the recitation of “said electrode” in line 1 of claim 21.

The Examiner has rejected applicants’ claims 18, 20-22, 24-29, 31 and 33-37 under 35 USC 103(a) as unpatentable over the Li, et al. patent (US 6,372,373) patent taken with the Isobe reference (Japanese Publication 05-335024). The Examiner has further rejected applicants’ claim 30 also under 35 USC 103(a) based on the latter two references taken with the Gionfriddo patent (US Patent No. 4,689,280) as evidenced by the Electronic Space Products International(ESPI). With respect to applicants’ claims, as amended, these rejections are respectfully traversed.

Applicants’ independent claim 18 has been amended to better define applicants’ invention. In particular, the recitation of “fold over a first surface of said plate structure forming” has been canceled from claim 18 to avoid language in the claim noted by the Examiner as being a process feature. Secondly, the recited “space between the current collector and said flat section of said first one of said two flanges” has now been further described as --defining a compliant member receiving space-- and the compliant member has now been described as being “in said wet seal area in said compliant member receiving space”. The latter changes are believed to highlight what applicants’ discussed with the Examiner as patentably distinguishing applicants’ claimed invention over the cited references.

More particularly, as discussed with the Examiner, the Li, et al. patent discloses what applicants have described as prior art in the subject application. In the structure of FIG. 7 of this patent, a corrugated current collector part (e.g., 72B of the spacer element 72 ; 73B of spacer element 73) extends into the flange area defining the wet seal area and is spaced from the facing flat flange part (e.g., 3; 4). A shim (e.g., 72A of the spacer element 72; 73A of spacer element 73) is placed in the space between the flange and the current collector. In this case, the combination of the extended corrugated current collector and shim provides the compliance in the wet seal area to accommodate shrinkage of the electrode.

As also discussed with the Examiner, applicants' invention lies in the recognition that the structure of the Li, et al. patent can be made to provide improved compliance in the wet seal area. In particular, applicants have recognized that this could be accomplished by using a compliant member having the recited cantilever construction in place of the solid shim. This was clearly not recognized in the Li, et al. patent nor was it readily apparent from the Li, et al. patent.

As pointed out to the Examiner, the Isobe reference in FIG. 22 shows a different structure than in the Li, et al. patent for realizing compliance in the wet seal area. In the Isobe reference, the corrugated current collector 6 is made so that it does not enter the wet seal area defined by the plate 13. Instead, a compliant spring 14 is used and is of a configuration that it occupies the entire wet seal area defined by the flange of the plate 13. The spring 14 in the Isobe reference can be corrugated (FIGS. 4 and 5) or cantilevered (FIGS. 4-21). The construction in the wet seal area in the Isobe reference is similar to the constructions used in the cited Mientek (US 4,514,475) and Louis (US 4,604,331) patents where extension of the current collector is not used and a compliant member is exclusively used in the wet seal area.

As also pointed out to the Examiner, the Li, et al. patent and the Isobe reference thus describe two different alternatives for achieving compliance in the wet seal area. One is to extend the current collector into the area and to use it and a shim on the collector as the compliant element. The other is to use a compliant member which occupies the entire wet seal area itself and does not rely on the current collector at all.

Finally, as concluded to the Examiner, neither the Li, et al. patent nor the Isobe reference recognizes the need for improved compliance in the Li, et al. patent type structure. The references together would thus suggest to the skilled artisan either using one or the other of the configurations (extended current collector and shim or un-extended current collector and compliant member) and thus at most might suggest replacing each of the spacer elements 72 and 73 in the Li, et al. patent with a cantilevered compliant member, but not replacing only each of the shims 72A and 73A of these elements with such a compliant member element.

Accordingly, applicants submit that applicants' amended claim 18, and its respective dependent claims, in reciting a "fuel cell for use in a fuel cell stack, said fuel cell having a plate structure defining an active fuel cell area and a wet seal area bordering said active fuel cell area, wherein two opposite edges of said plate structure form two flanges adjacent said first surface of said plate structure, each of said flanges comprising a flat section spaced apart from and parallel to said first surface of said plate structure, said wet seal area including a region between a flat section of a first one of said two flanges and a first portion of said first surface of said plate structure opposite that flat section and said active fuel cell area including a second portion of said first surface extending from said first portion of said first surface, said fuel cell further comprising: a corrugated current collector abutting and in contact with said active fuel cell area on said second portion of said first surface, said corrugated current collector

extending into said region included in said wet seal area on said first portion of said first surface and being spaced from said flat section of said first one of said two flanges, the space between the corrugated current collector and said flat section of said first one of said two flanges defining a compliant member receiving space; an electrode abutting said current collector over a region which excludes the region of said current collector extending into said wet seal area; a compliant member abutting and in contact with said current collector, said compliant member comprising a planar body member, wherein sections cut out of the planar body member at locations within the periphery of said planar body member extend outwardly of the plane of the planar body member, said sections of said planar body member imparting compliance to said compliant member, and wherein said planar body member is dimensioned such that the periphery of said planar body member is within said wet seal area; and further wherein said sections are arranged in a plurality of rows which are spaced along the width extend along the length of said planar body member; and said compliant member being in said wet seal area in said compliant member receiving space, thus patentably distinguish over combination of the Li, et al. patent and the Isobe reference. The Gionfriddo patent and Electronic Space Products International, add nothing to the Li, et al. patent and Isobe reference to change this conclusion.

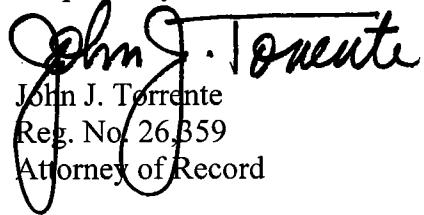
In view of the above, it is submitted that applicants' claims, as amended, patentably distinguish over the cited art of record. Accordingly, reconsideration of the claims

is respectfully requested.

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